

# Iowa's Cold In-Place Recycling

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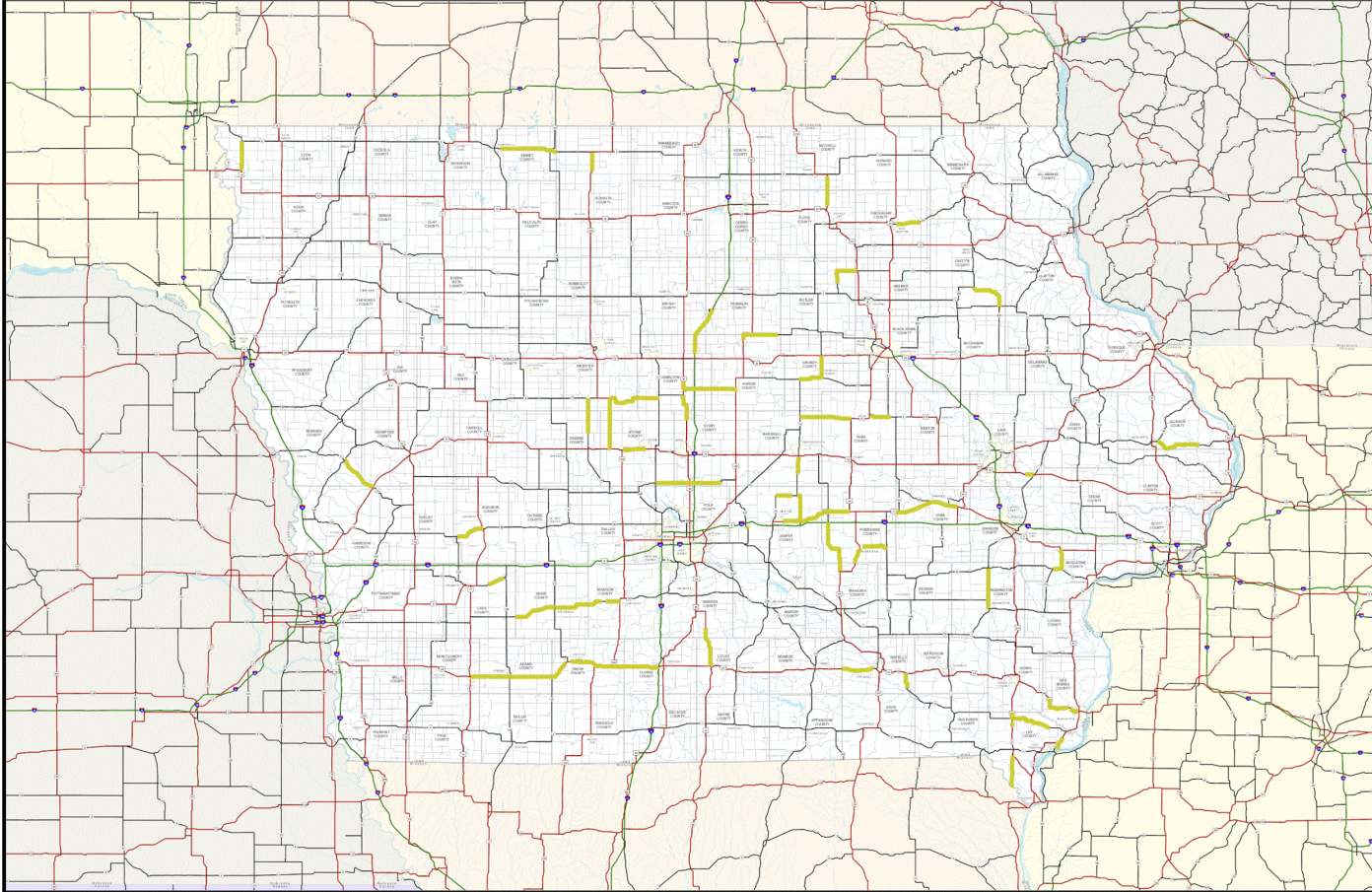
Iowa Department of Transportation



# Experience with In-Place Recycling

- Cold-in-place Recycling (foam and emulsion)
  - 5-year Total
    - 42 projects
    - \$149M
  - Many more local CIR projects
- Full Depth Reclamation (fly ash stabilization)
  - 5-year Total
    - 3 Projects
    - \$8.6M

# Iowa DOT Highway Division Portal - CIPR Projects



## Legend

## Notes



This map is a user-generated static output from an internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

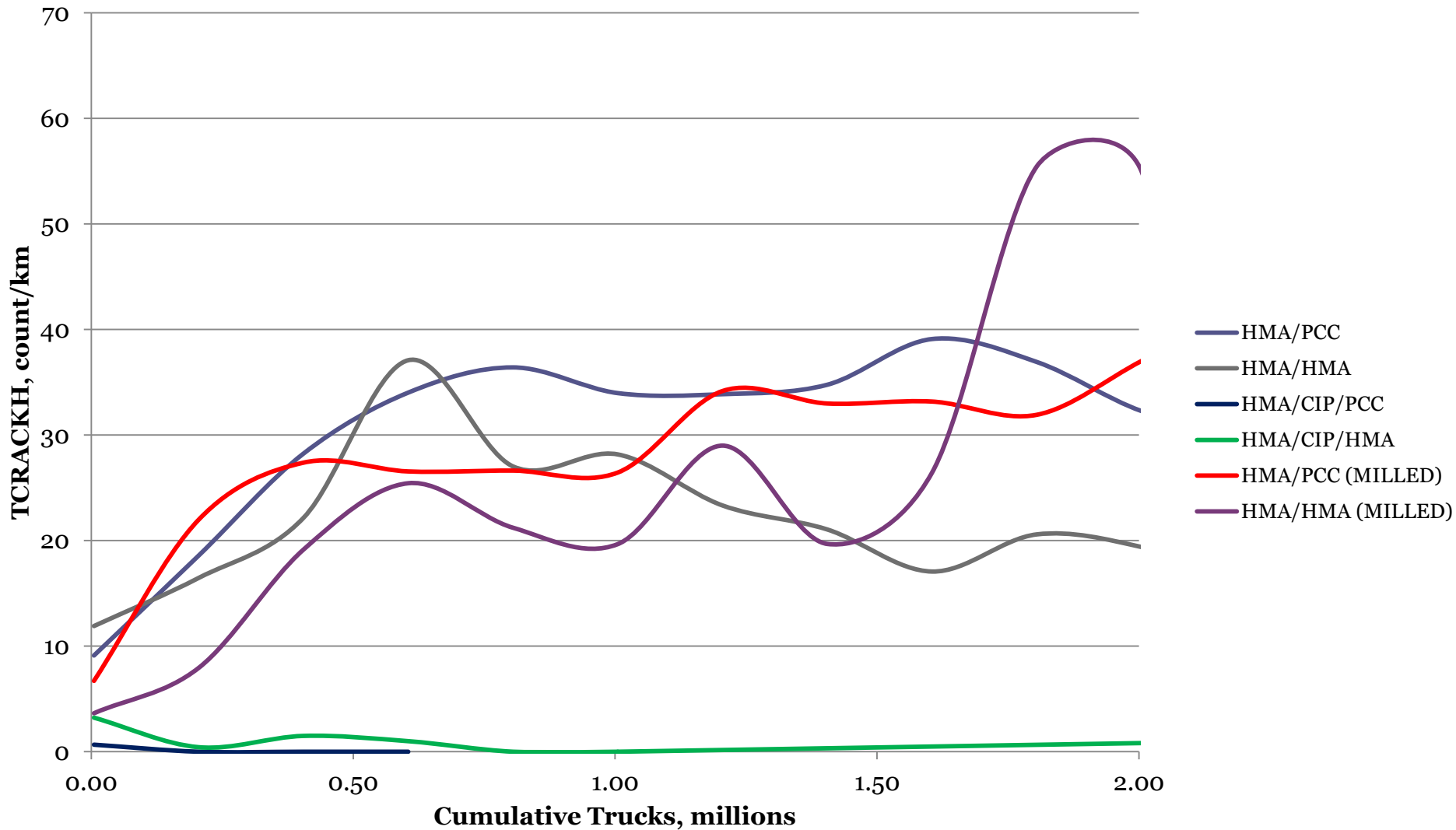
Created: 09/06/2013

1:2,990,922

WGS 1984 Web Mercator

# Iowa Field Performance

## Average High Severity Transverse Cracking 10 Year Span (3-4 inches HMA Surface)



# Cold In-Place Recycling

- $\leq 2,000$  ADT
  - At least 8" thickness (3" HMA)
  - Adequate structural support
  - Surface distress
  - Good candidate
- $> 2,000$  ADT
  - Can still be successful
  - Project evaluation
  - Introducing on Routes with higher truck volumes

# Cold In-Place Recycling

- Challenges During Construction
  - PVMT Widening Unit: District 3 places widening unit prior to CIR
  - Widening Units and Patches affect stabilizing agent rates
  - Moisture content

# Hwy 78 Keokuk County (2000)



# Hwy 78 Keokuk County (5 years)





# Hwy 78 Keokuk County (7 years)



# Hwy 78 Keokuk County (9 years)



# Hwy 175 Webster County (Pre-CIR)



# Hwy 175 Webster County (CIR)



# Hwy 175 Webster County (CIR 2 years)



# Hwy 175 Webster County (Pre-FDR)



# Hwy 175 Webster County (FDR)



# Hwy 175 Webster County (FDR 2 years)





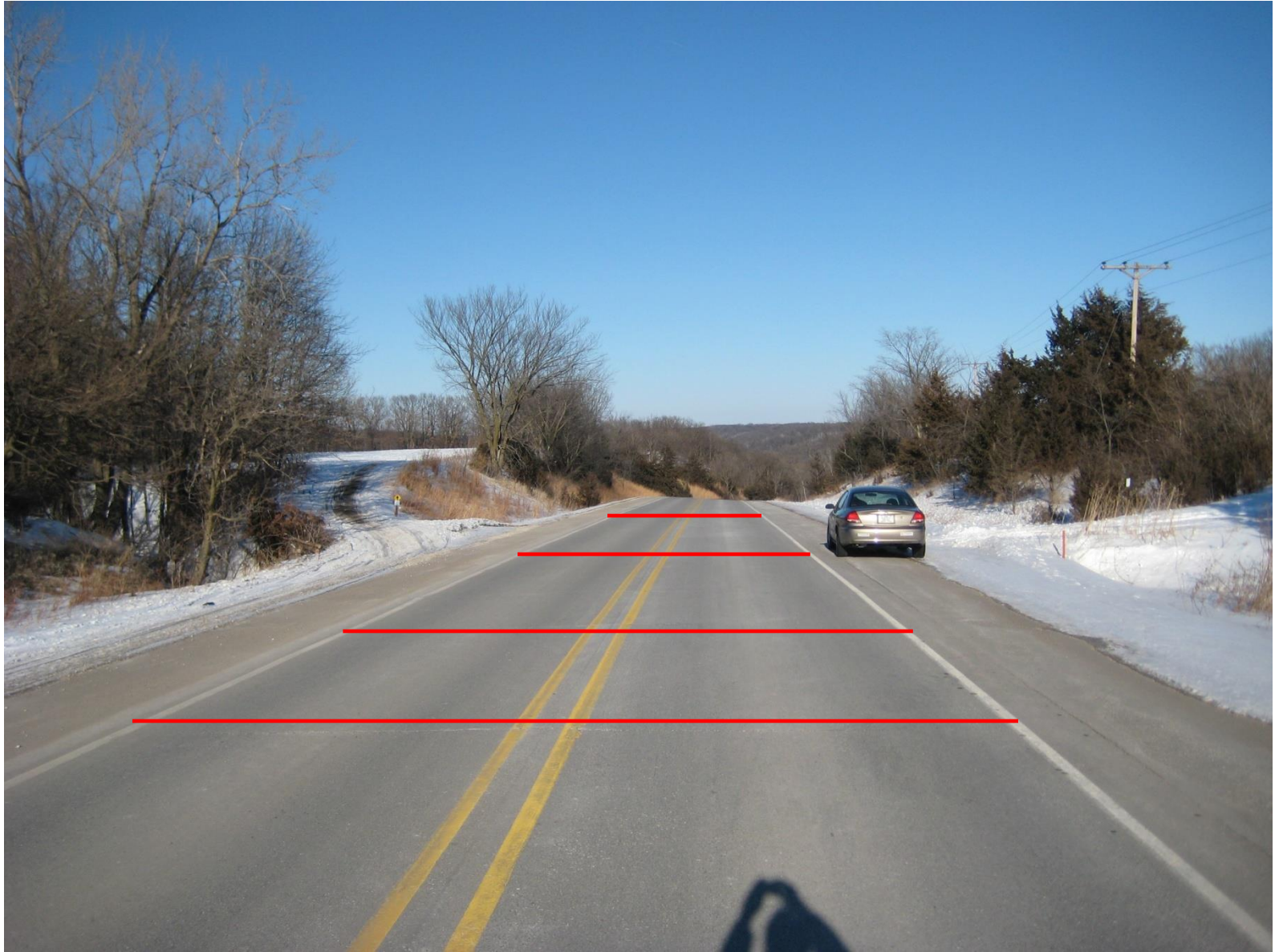
# Hwy 175 Webster County (Pre-Mill)



# Hwy 175 Webster County (Milled)



# Hwy 175 Webster County (2 years)



# Hwy 175 Webster County (Overlay)





Thank you